COMMONWEALTH OF VIRGINIA Department of Environmental Quality Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Trelleborg Engineered Products, Inc. – Seaward Division Clear Brook, Frederick County, Virginia Permit No. VRO81170

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Trelleborg Engineered Products, Inc. – Seaward Division has applied for a renewal of its Title V Operating Permit dated June 14, 1999, for its Clear Brook facility. The Department has reviewed the renewal application and has prepared a proposed Title V Operating Permit.

Engineer/Permit Contact:	Date: <u>5-11-04</u>
Air Permit Manager:	Date: 5-12-04
•	
Deputy Regional Director:	Date: 5-12-04

FACILITY INFORMATION

Permittee

Trelleborg Engineered Products, Inc. – Seaward Division Post Office Box 98 Clear Brook, Virginia 22624

Facility

Trelleborg Engineered Products, Inc. – Seaward Division 3470 Martinsburg Pike Clear Brook, Frederick County

AFS ID No.: 51-069-0112

SOURCE DESCRIPTION

SIC Codes 3089 (Plastic products) and 2821 (Plastic materials, synthetic resins, and nonvulcanizable elastomers)

(Equivalent to NAICS codes 326199 (All other plastics product manufacturing) and 325211 (Plastics materials and resin manufacturing)

Trelleborg Engineered Products, Inc. – Seaward Division manufactures specialty products such as foam-filled marine fenders and flotation products for the marine industry. Additionally, Technical Urethanes, a subsidiary of Trelleborg Engineered Products, Inc., formulates proprietary urethane coatings of which a portion is used in-house and the remainder is sold as separate product lines.

The Trelleborg Clear Brook facility includes the following five general manufacturing processes:

• Sprayed elastomer process: includes helical winding and flame lamination of polyethylene foam, routing of the resulting solid cylinder of foam, coating of the shaped foam cylinder in the large, small, and/or custom (technical urethanes or TU) spray booths, and finishing operations. Finished product is a marine fender.

In the spray booth, a urethane two-part coating is sprayed onto a rotating fender core in three spray booths. As the coating is sprayed on, nylon filaments are also wound onto the core. A urethane topcoat, without the nylon filaments, is sprayed on to complete the process. Volatile Organic Compounds (VOC) and Hazardous Air Pollutant (HAP) emissions result from evaporation of the coating carrier solvents and solvent cleaning. This process is the main source of plant VOC emissions.

- Elastomer formulations process: conducted in the Chemical Production Department, the process involves batch formulation of "A-side" solvented and non-solvented isocyanate terminated prepolymer resins and of "B-side" solvented and non-solvented amine curatives. The urethane coating components are produced in chemical reactors and are hard piped to spraying (large and small spray booths) and casting production areas or packaged and sold for off-site use. Urethane coating components are also sprayed in the spray booths from containers ranging in size from five to 55 gallons (coatings are delivered by pipe or container to the large and small spray booths and exclusively by containers in the custom (TU) booth). VOC and HAP is emitted from tank venting.
- Rigid pour foam process: includes making rigid polyurethane foam buoys in molds, followed by routing, helical winding, and spraying of the buoys in the large, small, and/or custom (TU) spray booth, and finishing operations.
- Elastomer technology casting process: includes batch blending and injection cast moldings for smaller production lines, using "A" side and "B" side urethane cast formulations. Small amount of VOC and HAP emissions result from initial degassing phase after the two formulations are mixed.
- <u>Technical urethanes spraying process</u>: a custom spray booth is used to apply polyurethane elastomers onto various smaller articles, including small fenders and buoys, and for research and development purposes.

The facility is a Title V major source of VOC and HAPs. The facility is located in an attainment area for all pollutants and is a PSD major source. The facility has not received new source review permits; its only permit is the Title V operating permit issued June 14, 1999. According to its application, no new equipment has been installed nor has any equipment been modified since issuance of the original Title V permit.

COMPLIANCE STATUS

In its application dated December 12, 2003, for Title V permit renewal, Trelleborg certified that it is in compliance with all applicable requirements. The facility is inspected biannually by DEQ. The most recent full compliance evaluation of this facility, including a site visit, was conducted September 27, 2002, and Trelleborg was found to be operating in compliance during the inspection. In addition, all reports and other data required by permit conditions or regulations which are submitted to DEQ are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements.

CHANGES SINCE INITIAL PERMIT

Trelleborg's Title V renewal application reflects several equipment changes that have taken place since the June 14, 1999 permit. The application indicates that no equipment has been installed or modified since 1999, but that several items have been taken out of service or moved to a different location on site, as follows:

- The Gusmer Rigid Foam Machine (Emission Unit ID 8 in June 14, 1999 permit equipment list) has been moved from the Casting Area (Area 9) to the Foam Fabrication/Finishing Area (Area 12) in 1999;
- The Casting Area (Area 9) and associated equipment (Units 22 25) were taken out of service in 1999;
- Finishing Area oven and vents (Units 26 28) were taken out of service in 1999;
- Two 500-gallon tanks (Units 20 and 21) used in the Casting Area (Area 9) were moved to Area 5 (Elastomers Technology Division) for storage;
- Small foam laminator (insignificant emissions unit) was moved from the Casting Area (Area 9) to Area 10 Foam Fabrication and Shipping and Receiving.

The equipment list in the proposed Title V renewal reflects the changes as well as updated capacity information for some units.

On December 1, 2002, Seaward International, Inc. was purchased by Trelleborg AB. The Title V permit was administratively amended on February 12, 2003, to reflect the name and ownership change.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Spray Booth	Spray Booths – Areas 1, 2, and 3						
1	A & B	Large spray booth (1974)	138 gal/hr	Columbus Industries SUPRA I overspray filters	CD1 & CD2	PM	-
2	C & D	Small spray booth (1975)	138 gal/hr	Columbus Industries SUPRA I overspray filters	CD3 & CD4	PM	-
3	Е	Technical urethanes spray booth (1979)	108 gal/hr	Columbus Industries SUPRA I overspray filters	CD5	PM	-
Elastomers '	Technology	Division – Area 5	•		•		
4	General bldg vent	Blue mixing machine	360 gal/hr	-	-	-	-
6	ZZ	Littleford mixer	50 gal	-	-	-	-
7	General bldg vent	Ross mixer	4 gal	-	-	-	-
19	General bldg vent	Ross mixer	10 gal	-	-	-	-
20	General bldg vent	Holding tank	500 gal	-	-	-	-
21	General bldg vent	Mixing tank	500 gal	-	-	-	-
51	CCC	Ross mixer	4 gal	-	-	-	-
52	General bldg vent	Littleford mixer	200 gal	-	-	-	-

53 – 56	General bldg vent	Curing ovens	Electric	-	-	-	-
57	General bldg vent	Sandblasting cabinet	-	-	-	-	-
58	General bldg vent	Storage tank	500 gal	-	-	-	-
Outdoor Sto	rage Tanks -	· Area 6					
29 & 30	R & S	Solvent storage tanks (ethyl acetate and toluene) (1986)	4000 gal. each	-	-	-	-
31	T	Distillate oil storage tank	20,000 gal	-	-	-	-
Sandblasting	g – Area 7				•		
50	Fugitive	Columbia C. Co. ER 114231 & Lehigh 1686 sandblasting	-	-	-	-	
Chemicals F	Production D	epartment – Area 8	1			•	
9	Н	Perry "A" side reactor tank	1000 gal	-	-	-	-
10	Н	RAS "A" side reactor tank	500 gal	-	-	-	-
11	Н	RAS "A" side reactor tank	100 gal	-	-	-	-
12	Н	Horseburgh & Scott "A" side holding tank	1500 gal	-	-	-	-
13	J	Ethacure "B" side mixing tank	500 gal	-	-	-	-
15	Н	"B" side holding tank	1000 gal	-	-	-	-
16	Н	Toluene flush tank	100 gal	-	-	-	-
			5-gal pails				
17 & 18	M	Raw material transfer	and 55-gal	-	-	-	-
			drums				
32 & 33	V	Food stock storage tenks	4000 gal			_	
32 & 33	<u> </u>	V Feed stock storage tanks	each	-		_	_
34	V	Feed stock storage tank	8000 gal	-	-	-	-

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35	U	Feed stock storage tank	4000 gal (850 gal stored at any one time)	-	-	-	-
Foam Fabric	cation / Finis	shing - Area 12					
8	General bldg vent	Gusmer Model VH-3000 casting machine	240 gal/hr				
28	General bldg vent	Adhesive application area	1.0 gal/hr	-	-	-	-

EMISSIONS INVENTORY

A copy of the 2002 annual emission update is attached. Emissions are summarized in the following tables.

2002 Actual Emissions

2002 Criteria Pollutant Emission in Tons/Year							
VOC	СО	SO_2	PM_{10}	NO_x			
126.04 <1 0.86 0.14 0.25							

2002 Facility Hazardous Air Pollutant Emissions

Pollutant	Emissions in tons/year
Toluene	43.9
Trichloroethylene	0.12
Dichloromethane	0.09
Methyl ethyl ketone	0.07
Dimethyl formamide	0.012
Xylene	0.012
Hexane	0.008
Ethyl benzene	0.002
Toluene diisocyanate	0.002
Methyl isobutyl ketone	0.0045
Methylene diisocyanate	0.000002
TOTAL	44.2

EMISSION UNIT APPLICABLE REQUIREMENTS – Areas 1 –3: Spray booths 1, 2, and 3 (1-3)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 - Visible emission limit for new equipment.

The permit requires operation of dry paint filters to demonstrate compliance with the visible emission requirements as authorized by 9 VAC 5-80-110.

Monitoring and Recordkeeping

The permit requires operation of dry paint filters to demonstrate compliance with the visible emission requirements. Properly operating paint filters can comply with the 20% opacity visible emission limit.

The permittee is required to inspect the paint filters on each day of spray booth operation. The inspection will include an observation of the pressure drop across the filter. A log recording the results of the inspection, including pressure drop and any maintenance or corrective action taken, shall be kept.

The potential to emit particulate matter (PM-10) of each spray booth before considering the control efficiency of the dry filter(s) is below the 100 tons/year major-source threshold for PM-10 (see Appendix H – Emissions Calculations Information of Trelleborg's Title V renewal application). Accordingly, the spray booth dry filters are not subject to Compliance Assurance Monitoring (CAM) (40 CFR Part 64).

Testing

The permit does not require source tests for the spray booths. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to the spray booths is required.

Streamlined Requirements

None

EMISSION UNIT APPLICABLE REQUIREMENTS - Solvent Storage Tanks (Tanks 29 & 30 – Area 6; Tanks 32, 33, 34, & 35 – Area 8)

Limitations

Effective March 29, 2004, 9 VAC 5 Chapter 20 (General Provisions) was amended to establish the Western Virginia VOC and NO_x control area, which includes Frederick County, in 9 VAC 5-20-206. As a result, VOC sources located in Frederick County, such as Trelleborg, are subject to applicable VOC standards in 9 VAC 5 Chapter 40 for existing sources, which is considered Reasonably Available Control Technology (RACT). Accordingly, select storage tanks at the facility have been determined to potentially be subject to applicable provisions of 9 VAC 5

Chapter 40, Article 25 (Emission Standards for VOC Storage and Transfer Operations (Rule 4-25)). The following Virginia Administrative Codes from Rule 4-25 that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-3430 A – Standard for volatile organic compounds from existing VOC storage and transfer operations, which requires that VOC storage tanks having greater than 2000-gal capacity be equipped with a control method that will remove, destroy, or prevent the discharge into the atmosphere of at least 60% by weight of VOC emissions during filling of the tanks. The requirement may be met by meeting the control technology guidelines in 9 VAC 5-40-3440 A.

9 VAC 5-40-3440 A.1 – Control technology guidelines for existing VOC storage and transfer operations, which includes filling of the tank(s) using a submerged fill pipe.

The permit requires that each storage tank (Ref. 29 & 30, 32-35) be designed and equipped to accommodate filling through use of a submerged fill pipe.

Rule 4-25 includes an exemption for tanks storing VOC having a vapor pressure of less than 1.5 pounds per square inch absolute under actual storage or, in the case of filling, under actual filling conditions. Currently, only one of the listed tanks (Tank 29) contains a VOC (ethyl acetate) having a vapor pressure greater than the exemption threshold. Trelleborg has indicated that it is possible that future solvent changes may result in one or more of the other tanks storing VOC having vapor pressure above the exemption threshold. As a result, all tanks have been listed in the section, but the permit clarifies that the requirements apply only when a tank is storing a VOC having vapor pressure above the threshold.

Monitoring and Recordkeeping

The permit requires that records certifying submerged fill pipe design be maintained for each storage tank (Ref. 29 & 30, 32-35).

Testing

The permit does not require source tests for the solvent storage tanks.

Reporting

No reporting specific to the storage tanks is required.

Streamlined Requirements

None

EMISSION UNIT APPLICABLE REQUIREMENTS – Sandblasting (Area 7)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-90 -Standard for Fugitive Dust, which requires reasonable precautions to prevent particulate matter from becoming airborne. Precautions may include adequate containment methods during sandblasting operations.

9 VAC 5-50-80 - Visible emission limit for new processes.

The permit requires the use of a building enclosure for sandblasting operations and monthly cleanup of blasting debris to prevent fugitive dust emissions as authorized by 9 VAC 5-80-110.

Monitoring and Recordkeeping

The permit requires Trelleborg to inspect the containment each day of sandblasting operation. The inspection will include a visible inspection of the containment to ensure proper placement and effectiveness.

A log recording the date and time of monthly sand blasting material cleanup, date and time and results of the daily sand blasting inspection, and any clean-up or corrective action taken, shall be kept.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No reporting specific to the sandblasting is required.

Streamlined Requirements

None

HAZARDOUS AIR POLLUTANTS REQUIREMENTS

As a major source of HAPs, Trelleborg is subject to five rules in 40 CFR Part 63 (National Emission Standards for HAPs (NESHAPs) from Source Categories). All five rules have been promulgated and have future compliance dates; two have not yet been published in the Federal Register. The applicable rules are:

- Miscellaneous Organic NESHAP (40 CFR Part 63 Subpart FFFF): applicable to coating manufacturing processes involving chemical reaction in the chemical production department (Area 8) and affiliated operations. Compliance date: November 10, 2006.
- Miscellaneous Coating Manufacturing NESHAP (40 CFR Part 63 Subpart HHHHH): applicable to coating manufacturing processes in the chemical production department (Area 8) and affiliated equipment that do not involve chemical reaction but involve blending and formulation activities. Compliance date: December 11, 2006.
- Miscellaneous Metal Parts and Products Coating NESHAP (40 CFR Part 63 Subpart MMMM): applicable to the spray booths (Areas 1, 2, and 3) and affiliated operations. Compliance date: January 2, 2007. Because Trelleborg's metal parts and products coating constitutes less than 10% of total coating at the facility (the rest being plastic parts/products coating), Trelleborg would qualify for the rule's "predominant activity" option (40 CFR 63.3881(e)(2)). The option allows compliance with the Plastics Parts and Products Coating NESHAP to constitute compliance with the Miscellaneous Metal Parts & Products, as long as records are maintained showing the percentage of coating used on each type of substrate (plastic or metal).
- Organic Liquid Distribution NESHAP (40 CFR Part 63 Subpart EEEE): applicable to the outdoor storage tanks and associated equipment leak components in Area 6. Compliance date: February 5, 2007.
- Plastic Parts and Products Coating NESHAP (40 CFR Part 63 Subpart PPPP): applicable to the spray booths (Areas 1, 2, and 3) and affiliated operations. Final rule has not yet been published in the Federal Register. Compliance date: three years after the date of final rule publication in the Federal Register.

Trelleborg's application indicates that it intends to make operational and equipment changes to drastically reduce its use of VOC and HAP materials. Specifically, Trelleborg has developed a 100% solids coating process that would virtually eliminate VOC from its operations. To enable spraying of higher solids or 100% solids materials, coating viscosity increases will require process piping changes, storage tanks for heating and volume, and a new spray machine at each spray booth. Trelleborg intends to implement the process changes before the earliest of the compliance dates for the applicable NESHAPs (i.e., before November 10, 2006).

The permit includes the requirement to comply with each of the NESHAPs listed above by the compliance dates, unless the facility obtains federally enforceable limits on its facility-wide emissions of HAPs to below major-source thresholds ("synthetic minor HAP limits") prior to the compliance dates. Because of Trelleborg's intention to become a synthetic minor source, details of each NESHAP have not been incorporated into the proposed permit. If Trelleborg does not become a synthetic minor source, its Title V permit will need to be modified to include detailed compliance requirements (including all control, operational, work practice, monitoring, recordkeeping, reporting, and testing requirements, as applicable) from each NESHAP during the renewal term.

The permit also contains the initial notification requirements for two of the NESHAPs (Miscellaneous Metal Parts/Products and Plastic Parts/Products). The initial notification requirements have been included because the due dates are prior to the NESHAP compliance dates. Trelleborg has already provided EPA a notification for Subpart FFFF (Miscellaneous Organic NESHAP) on March 9, 2004. The notifications for Subpart HHHHH (Miscellaneous Coating Manufacturing NESHAP) and for Subpart EEEE (Organic Liquid Distribution NESHAP) are due April 9, 2004, and June 2, 2004, both before the term of the Title V renewed permit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

STATE ONLY APPLICABLE REQUIREMENTS

Trelleborg's renewal application identifies no state-only applicable requirements. Accordingly, none have been included in the proposed permit.

FUTURE APPLICABLE REQUIREMENTS

No future applicable requirements have been identified.

INAPPLICABLE REQUIREMENTS

The permittee did not identify any inapplicable requirements in the permit application.

The Department has determined that the following requirements are not applicable:

The Synthetic Organic Chemical Manufacturing Industry (SOCMI) NESHAP CFR Part 63, Subparts F, G, and H and 9 VAC 5 Chapter 60 are not currently applicable. The Chemical Production Department does not produce any of the compounds in Table 1 of Subpart F.

The *Group I and Group IV Polymer and Resins Production NESHAP in 40 CFR Part 63 Subparts U and JJJ* and 9 VAC 5 Chapter 60 are not currently applicable. The Chemical Production Department does not produce any of the applicable polymers or resins. The *Polyether Polyols Production NESHAP in 40 CFR Part 63 Subpart PPP* and 9 VAC 5 Chapter 60 are not currently applicable. The Chemical Production Department uses polyether polyols as feedstock, but does not produce the polyols.

The *Flexible Polyurethane Foam Production NESHAP in 40 CFR Part 63 Subpart III* and 9 VAC 5 Chapter 60 is not currently applicable. The facility does not produce flexible polyurethane foam. The facility produces rigid polyurethane foam and is a flexible polyethylene foam fabricator.

The *Halogenated Solvent Cleaning NESHAP in 40 CFR Part 63 Subpart T* and 9 VAC 5 Chapter 60 is not currently applicable. Halogenated solvents are not used in cold cleaning or vapor cleaning machines/equipment. Halogenated solvents are used in mold release compounds and mixer/spray cleaning.

The Reinforced Plastic Composites (RPC) Production NESHAP at 40 CFR Part 63 Subpart WWWW is not currently applicable. Subpart WWWW applies to RPC facilities using thermoset resins or gel coats containing styrene; Trelleborg does not use resins or gel coats that contain styrene.

The *Flexible Polyurethane Foam Fabrication NESHAP at 40 CFR Part 63 Subpart MMMMM* is not currently applicable. Subpart MMMMM applies to plants that fabricate flexible polyurethane foam; Trelleborg fabricates rigid polyurethane foam and flexible polyethylene foam.

The Industrial/Commercial/Institutional Boiler and Process Heater NESHAP at 40 CFR 63 Subpart DDDDD is not currently applicable. None of Trelleborg's fuel-burning units fit the definition of boiler (they heat air, not water or steam) or process heater (they provide comfort heat or, in the case of the flame laminators, the combustion gases come into direct contact with process materials; the definition of process heater excludes units providing comfort or space heat and specifies that process heater combustion gases do not directly contact process materials).

The Negotiated Regulation for Equipment Leaks NESHAP in 40 CFR Part 63 Subpart I and 9 VAC 5 Chapter 60 is not currently applicable. 40 CFR Part 63 Subpart FFFF (Miscellaneous Organic NESHAP), which is applicable to Trelleborg, incorporates equipment leak requirements from 40 CFR Part 63 Subparts TT, UU, or F.

The New Source Performance Standards (NSPS) for petroleum or volatile organic liquid storage vessels in 40 CFR Part 60 Subparts K, Ka, and Kb and 9 VAC Chapter 50 are not currently applicable. The organic solvent storage tanks are all less than 10,000 gallons. The distillate oil storage tank is less than 40,000 gallons.

The NSPS for polymeric coating of supporting substrates in 40 CFR Part 60 Subpart VVV and 9 VAC Chapter 50 is not currently applicable. NSPS applies to web coating processes.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
36	Hazardous waste area fuel oil tank (275 gal)	9 VAC 5-80-720 B	VOC	
37	Flexaire Furnace Model SDF-50-02SHRH	9 VAC 5-80-720 C		0.625 MMBtu/hr
38	Flexaire Furnace Model SDF-150-OMF8-R	9 VAC 5-80-720 B	SO ₂ , NO _x	
39	Lennox Industries Model OS12-155	9 VAC 5-80-720 C		0.125 MMBtu/hr
40	Lennox Oil Heater	9 VAC 5-80-720 C		0.125 MMBtu/hr
41	Regnor ITT Unit Heater	9 VAC 5-80-720 C		0.230 MMBtu/hr
42	Model NTL 196B47 Burner A	9 VAC 5-80-720 C		0.245 MMBtu/hr
43	Flexaire Furnace Model SDF-175-DSMH	9 VAC 5-80-720 B	SO ₂ , NO _x	
44 – 49	Reflect-O-Ray Model 2570-115-08	9 VAC 5-80-720 C		0.125 MMBtu/hr each
59	Large Helical Winding Machine	9 VAC 5-80-720 B	SO ₂ , NO _x ,	
60	Small Foam Laminator Machine	9 VAC 5-80-720 B	SO ₂ , NO _x	

¹The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B Insignificant due to emission levels
- 9 VAC 5-80-720 C Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V renewal application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be place on public notice in the <u>Winchester Star</u> newspaper from March 26, 2004 to April 25, 2004.

ATTACHMENT

2002 Emissions update